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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,164	12/18/2001	Albert Alec Talin	CR00-029	6435
23330	7590	10/04/2004	EXAMINER	
MOTOROLA, INC. CORPORATE LAW DEPARTMENT - #56-238 3102 NORTH 56TH STREET PHOENIX, AZ 85018			MAYEKAR, KISHOR	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,164	TALIN ET AL	
	Examiner	Art Unit	
	Kishor Mayekar	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7 September 2004 has been entered.

Claim Objections

2. Claims 1, 3 and 13 are objected to because of the following informalities:
- in claim 1, typo error in the phrase "dissolved metal ions disposod therein" in lines 4-5 (emphasis added); the missing --an-- before the phrase "alcohol and a plurality of emitting structures;" in line 15, and the omitting of the phrase --removed-- before the phrase "substrate to form adhesion properties";
 - in claim 6, the typo error in the phrase "a solvont"; and

- in claim 13, the missing right parenthesis to the chemical formula.

Appropriate correction is required.

3. The claims as presented in paper filed 9 September 2004 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the claims.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-11 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it recites that the suspension bath consisting of [a] colloidal solution of an alcohol and a plurality of emitting structures, that is the use of the term "consisting of" that excluding any nonspecified element. However, dependent

claim 6 recites that the bath includes another ingredient, a dispersion agent. Such a claim relationship is incorrect because claim 6 is now broader than claim 1.

In claim 3, the phrase "providing a solvent ..., includes the step of providing, ... having a solute salt disposed therein" is confusing as whether the including step is another step or same step and/or the relationship of the solvent vs. the recited solvent in the including step, and the metal ions vs. the solute salt in the including step.

In claim 5, it is confusing as applied to claim 3 as whether the including colloidal solution is another colloidal solution in the colloidal solution of an alcohol and a plurality of emitting structures or the same.

In claim 8, the phrase "a plurality of emitting structures" is confusing as whether they are the same subject matter as recited in claim 1 or another.

In claim 9, the same is applied to claim 1 as to its claim relationship with the dependent claim 15.

In claim 10, the same is applied to claim 3.

In claim 14, the same is applied to claim 5.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUSS (6,462,467) in light of RUSS et al. (6,342,755) and in view of JIN et al. (5,977,697). RUSS '467's invention, a reference cited in the previous Office action, is directed to method of making a field emission device. RUSS discloses that the method comprises all the steps as claimed except for the use of the recited suspension and the step of thermal processing (claims 11 and 15; col. 3, lines 29-53 and col. 4, line 30 through col. 5, line 46; and Fig. 1B). However, RUSS '467 discloses in col. 3, lines 40-50 that the field emitting layer is applied by a process as disclosed in his copending application serial No. 09/373,028, now U.S. Pat. No. 6,342,755 and in col. 3, lines 60-66 the electron emitting materials. RUSS '755 discloses the step of thermal processing the coated substrate after the electrophoretic deposition of the field emitting layer (col. 6, lines 1-17).

As to the use of the recited suspension bath, Jin shows in a method for making a field emission device the step of electrophoretic depositing a field emitter layer from a suspension of diamond particles suspended in an alcohol (col.

4, lines 25-39). As such, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the RUSS '467 in light of RUSS '755 as shown by JIN because the selection of any of known equivalent suspension baths for the electrophoretic depositing of the field emitting layer would have been within the level of ordinary skill in the art.

8. Claims 9-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUSS '467 in light of RUSS '755) and in view of JIN '697 and CHOI et al. (6,616,497). RUSS '467 in light of RUSS '755 as applied above further discloses in col. 3, lines 60-65 that forms of carbon can be used as the emitting materials. The further difference between the references as applied above and the above claims is the use of carbon nanotube as the emitting materials. CHOI, another reference cited in the previous Office action, shows in a method of manufacturing field emitter by electrophoretic deposition the use of carbon nanotubes as the emitting materials (see abstract and col. 2, lines 41-58). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references'

teachings as shown by CHOI because the selection of any of known equivalent emitting materials would have been within the level of ordinary skill in the art.

9. Claims 9-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUSS '467 in light of RUSS '755) and in view of JIN '697 and JP 2001-312955A (with an attached computer translation). RUSS '467 in light of RUSS '755 as applied above further discloses in col. 3, lines 60-65 that forms of carbon can be used as the emitting materials. The further difference between the references as applied above and the above claims is the use of carbon nanotube as the emitting materials. JP '955 shows in a method of manufacturing filed emitter by electrophoretic deposition the use of carbon nanotubes as the emitting materials (see abstract and paragraph [0059]). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by JP '955 because the selection of any of known equivalent emitting materials would have been within the level of ordinary skill in the art.

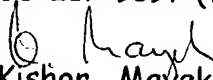
Response to Arguments

10. Applicant's arguments filed 7 September 2004 have been fully considered but they are not persuasive because of the new grounds of rejection as set forth in the above paragraphs.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kishor Mayekar
Primary Examiner
Art Unit 1753